US Underuse of GLP-1RA, SGLT-2i in Type 2 Diabetes Persists

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The study covered in this summary was published in medRxiv.org as a preprint and has not yet been peer reviewed.

Key Takeaways

- Only 11% to 14% of US adults with type 2 diabetes received treatment with a glucagon-like peptide-1 receptor agonist (GLP-1RA) or with a sodium glucose cotransporter-2 (SGLT2) inhibitor from 2018 to 2020 despite clear indications for their use.
- The data showed no significant increase in new prescriptions for these agents in patients with type 2 diabetes from 2018 to 2020.
- Use of agents from both these drug classes dropped off sharply after treatment initiation: After 3 months, only two thirds of patients were consistently taking the medications. By 12 months after starting one of these agents, only half of patients continued taking their prescription.
- The clinical importance of these agents may be underemphasized, as prescriptions were also underfilled for patients with and those without risk for cardiovascular and kidney disease.

Why This Matters

- Agents from both the GLP-1RA and SGLT-2 inhibitor classes confer protection against major atherosclerosis-based adverse cardiovascular events in patients with atherosclerotic cardiovascular disease (ASCVD). SGLT-2 inhibitors also lower the risk of hospitalization for heart failure and prevent worsening kidney function in patients with type 2 diabetes and ASCVD risk or with diabetic kidney disease.
- Use of these agents has been endorsed in at least some guidelines since 2017, and since 2020, they have been consistently recommended across all published guidelines for selected patients independent of their glucose-control status.
- US clinicians prescribed GLP-1RAs and SGLT-2 inhibitors less often compared with older, less expensive medications such as metformin and sulfonylureas, possibly reflecting financial burdens and other potential barriers to use. The findings support the hypothesis that drug costs may hinder prescribers and patients from using agents from the GLP-1RA and SGLT2 inhibitor classes.
- The low uptake and inconsistent use of agents from these two classes despite evidence for their safety and efficacy pose a challenge to realizing their potential benefits for improving health outcomes at a time of expanding indications for use of agents from these two classes.
- The findings suggest a guideline-discordant prescription pattern that does not adequately reflect or promote the trial-proven nonglycemic benefits of these two drug classes.

Study Design

- This was a nationwide US study (cross-sectional for medication use and prospective for prescription fills) of administrative data collected by Optum Labs from 587,657 adults with type 2 diabetes from 2018 to 2020. The database included patients with continuous coverage for the 36-month period with either Medicare Advantage or commercial health insurance who had at least two claims more than 90 days apart with a primary or secondary diagnosis of type 2 diabetes
- Subjects had comorbid conditions that met guideline-directed indications of ASCVD for GLP-1RAs and of ASCVD, heart failure, and diabetic nephropathy for SGLT2 inhibitors.
- Demographic data used in analysis included age, sex, type of health insurance, comorbid conditions in the Diabetes

Complications Severity Index and the Charlson Comorbidity Index, and use of other cardiovascular agents, such as statins, antihypertensives, and oral anticoagulants.

- The main outcomes and measures were prescription rates for agents from the two studied classes and monthly fill rates during the 12 months following the start of therapy.

Key Results

- From 2018 to 2020, 80,196 people filled GLP-1RA prescriptions, which was 13.6% of those with type 2 diabetes and 12.9% of those with type 2 diabetes and coexisting established ASCVD.
- During the same period, 68,149 people filled a prescription for an SGLT2 inhibitor, which was 11.5% of those with type 2 diabetes and 10.5% of those with type 2 diabetes and any additional indication such as ASCVD, heart failure, or diabetic nephropathy.

Limitations

- The data represent only a subset of payers.
- The study did not consider differences in insurance coverage and did not include uninsured individuals, which likely resulted in overestimates of prescription and fill rates.
- The authors did not have access to data on glycemic control and drug side effects, which could potentially affect continuation of therapy.
- Comorbidities were determined using claim-based indicators, a method that may have underestimated their true prevalence and that could not account for patients with high ASCVD risk but no established evidence of ASCVD.
- The analysis did not include information on social factors that can affect health, such as occupation and education level, and ascertainment of family income relied on residential neighborhood averages and not on actual, individualized income levels.

Study Disclosures

- The study was funded in part by UnitedHealth Group, which employs three of the authors.
- The corresponding author and one co-author hold a patent on "methods for neighborhood phenotyping for clinical trials," and both also co-founded a "precision health and digital health analytics platform."
- Two co-authors reported receiving personal or consulting fees from several different drug companies, including some companies that market agents from the GLP-1RA and SGLT2 inhibitor classes, and a third co-author received research funding from Janssen, which markets an SGLT2 inhibitor.

This is a summary of a preprint research study, "Patterns of Medication Use and Prescription Fills for Cardioprotective Anti-Hyperglycemic Agents in the United States," by researchers from Yale School of Medicine, New Haven, Connecticut, and co-authors from several other US sites on medRxiv provided to you by Medscape. This study has not yet been peer reviewed. The full text of the study can be found on Medrxiv.org.

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